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ABSTRACT

This paper examines basic skills competencies developed by Mexican immigrant adult learners through participation in (although not always completion of) adult basic education programs conducted by the Mexican, Instituto Nacional para la Educacion de los Adultos (INEA). The comparison provides the conceptual basis for configuring instructional designs and for developing individual learner strategies to improve the effectiveness and efficiency of English as a Second Language (ESL) and Adult Basic Education (ABE) programs serving Mexican-origin adult learners in California. The INEA program consists of three, sequential curricula dealing with basic literacy, core skills, and advanced skills as defined in nationally-accepted textbooks. This paper includes a summary overview of an emerging framework for understanding basic skills in the context of contemporary American worklife and social interactions to permit equitable access to employment opportunities and community life and understanding of the daily challenges faced by these immigrants in California. INEA's emphasis on cooperative learning and self-directed learning provides a solid basis for extending adult learner's educational experience out of the classroom and into real life situations, although oftentimes the individualized methodology cannot be replicated. (Contains 30 references) (Adjunct ERIC Clearinghouse for ESL Literacy Education) (Author/NAV)

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New Paradigms for Adult Learning:

Building on Mexican Immigrants' Prior Experience to Develop Basic Skills for the Information Society

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September 1993

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New Paradigms for Adult Learning:

Building on Mexican Immigrants' Prior Experience to Develop Basic Skills for the Information Society

This paper examines contemporary concepts of "basic skills' competencies" and analyzes the basic skills competencies developed by Mexican immigrant adult learners through participation in adult basic education programs conducted by INEA (Instituto Nacional para la Educacion de los Adultos). This comparison provides the conceptual basis for configuring instructional designs and for developing individual learner strategies to improve the effectiveness and efficiency of ESL (English as a Second Language) and ABE (Adult Basic Education) programs serving Mexican–origin adult learners in California.

The INEA's Adult Basic Education curriculum consists of three sequential curricula — Basic Literacy Development (*Alfabetización*), Primary Core Skills (*Primaria — Primera Parte*), and Primary–Advanced Skills and General Concepts (*Primaria — Segunda Parte*). These curricula and the competencies developed in them are described in this paper.[1] Like most educational delivery systems, the backbone of INEA's primary subjects curriculum consists of a series of nationally–adopted textbooks. These textbooks define the competencies expected of adult learners who have participated in INEA sponsored learning activities. However, the actual competencies of INEA based adult learners must be understood and interpreted in the context of INEA's philosophy of adult education, recommended learning methodologies, and delivery system for promoting adult learning.

By the same token, adequate understanding of basic skills competencies developed in the course of INEA sponsored adult learning programs must be related to our own conceptual framework for understanding "basic skills". This paper, thus, begins with a summary overview of an emerging framework for understanding "basic skills" in the context of contemporary American worklife and social interactions. This framework provides the basis for "rich" multi–dimensional

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[1] This paper focuses on basic skills competencies as distinguished from English-language competencies. In many respects basic literacy skills cannot be examined in isolation from the specific language in which those skills are exercised. However, the current analysis responds to a requirement to examine INEA's "elementary subjects curriculum" as a basis for comparison with California's Elementary Subjects instructional area. To the extent that ESL curricula function also to foster basic skills development, this paper is relevant to this instructional area.

characterizations of the skills required to assure adults now living in California (be they native–born or immigrant) (1) equitable access to employment opportunities, (2) the ability to participate fully in the life of their communities, and (3) the communication and conceptual agility needed to confront the challenges they face in their individual and family lives.

The Emerging Conceptual Framework for Understanding Basic Skills Development

Although the legislative definitions that form the basis for adult education programs in the U.S. are defined in terms of grade–level equivalents, it has been recognized for more than two decades that measures of such theoretical equivalence bear little relationship to the basic skills actually required to function in the contemporary information society.

Early efforts to supersede inadequate traditional concepts of literacy competencies emphasized real world competencies (as opposed to specific reading, computation, or writing tasks presumed to relate to a specific K–12 grade level) and distinguished between "life skills" and "employment–related skills". These new directions, while positive, were inadequate to capture the full spectrum of information–processing demands placed on all adults in contemporary society.

In the past two years, however, two important federal initiatives have provided a solid basis for an emerging conceptual framework to assess adult learners' basic skills competencies. These initiatives are the development of a basic skills framework by the Secretary's Commission on Achieving the Necessary Skills (SCANS, 1992; 1993) and a National Literacy Survey sponsored by the Employment Training Administration of the U.S. Department of Labor and conducted by the Educational Testing Service (Kirsch, Jungeblut, and Campbell, 1992)

It is noteworthy that the basis for the newly–emerging framework for analyzing "basic skills" stems as much or more from analyses of workplace skill requirements as from "life skill" requirements. Where it has traditionally been the role of educators and humanists to articulate the need for educational service delivery systems configured to allow learners to achieve "their full potential", it is now business leaders, systems analysts, and policy analysts concerned with industrial productivity who have most forcefully sounded the call for "world–class" standards in American education. Common to both the SCANS framework, the ETS literacy assessment framework, and the research of workplace literacy researchers and policy analysts such as Anthony Carnevale, Forrest Chisman, Jorie Philippi, and Larry Mikulecky is a recognition that adult learning programs must focus increasingly on the development of the "meta–cognitive" skills required to respond to the demands of a society and economy that has shifted dramatically toward more information–intensive transactions. Meanwhile, concurrent

educational reform efforts within the K–12 system have, also, begun to stress the need to develop the competencies required to respond to real world demands (as distinguished from arbitrary curriculum benchmarks).

The SCANS conceptual framework articulates five competencies, which are, in turn, considered to rest on the development of a three–part foundation of skills and personal qualities. These competencies are summarized in Figure 1 (adapted from SCANS):

Figure 1

SCANS Competencies and the Three–Part Foundation

for Workplace Functioning

Competency 1 — Using Resources	Identifying organizing, planning and allocating resources of time, money, material and facilities, and human resources
Competency 2 — Interpersonal Interactions	Participating as a member of a team, teaching new skills to others, serving/responding to clients and customers, exercising leadership, negotiating, and working with diverse individuals
Competency 3 — Acquiring and Using Information	Acquiring and evaluating information. Organizing and updating information. Interpreting and communicating information. Using computers (and other information technology) to process information
Competency 4 — Understanding Systems	Understanding complex inter–relationships, understanding social, organization, and technological systems and operating effectively with (and within) them. Monitoring and correcting performance. Designing or improving systems
Competency 5 — Working with a variety of Technologies	Selecting appropriate technology, applying technology to task, maintaining and troubleshooting equipment
Foundation 1 — Basic Literacy Skills	Reading, writing, listening, and speaking, use of mathematics. Key abilities include ability to apply skills to practical situations, including work with documents combining graphic, mathematical, and ordinary language information (e.g. manuals, graphs, flow charts)
Foundation 2 — Thinking Skills	Creative thinking, informed decision–making, problem–solving, seeing things in the mind's eye, knowing how to learn, reasoning. A key requirement is to integrate thinking skills with basic literacy skills as well as oral and written communication
Foundation 3 — Personal Qualities	Responsibility, self–esteem, sociability, self–management, integrity/honesty

(Adapted from SCANS, **What Work Requires of Schools**, 1992)

As can be seen from this overview, the SCANS competency framework provides an analytic matrix that, to a remarkable degree, captures traditional humanistic concepts of learning (for either adults or children), emphasizing the development of the competencies that allow individuals empowerment — in terms of ability to their participate fully in the social and political life of their communities, and in terms of their ability to achieve career mobility in the workplace (a basic requirement for economic self–sufficiency).

While adults can be expected to develop the competencies and "foundation abilities" defined in the SCANS framework both from their participation in formal programs of adult learning and from everyday interactions in informal learning environments, it is important to recognize the educational disadvantage faced by immigrants in identifying, practicing, and mastering SCANS–type competencies. Because these competencies are to a large extent implicit, not explicit, in the course of everyday social and economic interactions, there are, in many regards taken for granted. The difficulties experienced by immigrants in developing these SCANS–type competencies relate to their not having access to the axiomatic "rules of the game" of social functioning in U.S. society and workplace interactions. Skills deficits, or incomplete mastery of SCANS–type competencies are, then, seen as failings of personal character, lack of intelligence, or willful disregard of prevailing social mores. While the SCANS competencies reflect, on the one hand, competencies that are "universal" in all cultures, the reality faced by Mexican immigrants to California is that these competencies are embedded in a specific cultural/social context — fast–paced interactions in an increasingly turbulent California society.

The ETA/ETS literacy assessment framework is based on work over the past decade at ETS to provide reliable measures of the complex information–processing skills that characterize contemporary real world demand for literacy task completion. This framework distinguishes between prose literacy tasks (roughly corresponding to traditional concepts of reading/writing competencies), document literacy abilities (integrating language, graphic, and mathematics–based processing), and quantitative literacy tasks. There are a number of important implications from the findings of the ETA/ETS national study of three populations (i.e. JTPA participants, unemployment insurance claimants, and young adults) because they correspond so closely to the universe of adult education program participants. These findings include the recognition that 40–50% of those surveyed demonstrate such inadequate literacy abilities that even their participation in job training programs is compromised. Another key finding is that between two–thirds and three–fourths of the respondents surveyed recognized that they could get a better job if they were to improve their literacy competencies. In short, the ETA/ETS 1992 study provides stark evidence that the literacy skills identified in the ETA/ETS framework and in the SCANS framework are, indeed, "basic", that these competencies are required to achieve even a modicum personal or career stability.

The implications of this emerging framework for analyzing and assessing "basic skills" competencies is that one–dimensional measures of basic skills adequacy cannot provide a reliable basis for assessing adult learners' current "human capital" or for designing learning programs to help them achieve the basic skills required for functioning in the context of community life or the workplace. In terms of assessing the basic skills competencies of Mexican immigrants with some adult learning experience in INEA sponsored programs in Mexico, it becomes necessary not simply to compare benchmarks but to examine the assumptions, learning objectives, and instructional methodology that make up the Mexican learning environment.

The outcome of assessing these learners' current abilities can then form the basis not to embark on a program of skills remediation but for developing learning programs focusing directly on the issue of "skills transfer" — determining the strategic learning accomplishments that can most efficiently and effectively provide Mexican immigrant adults with the foundation they need for functioning in a new and unfamiliar social context. Consideration of these factors (understanding that the issue is not quantitative measurement of progress along a theoretical uni–dimensional continuum of literacy abilities) can then provide a focus for designing programs — once it is understood that the real issue is to facilitate the cultural transition from rural peasant society in Mexico to high tech — high touch workplace and social network in California (Kissam, 1991).

The outcome of these programs will not be full–fledged empowerment to function in the context of California society. They will more modestly address the goal of allowing these adult learners equitable opportunities to prepare for and learn on the job, through participating effectively in a wide range of day–to–day information transactions, and charting ongoing strategies for lifelong learning.

The INEA Framework for Adult Learning

The previous section develops the analytic framework for interpreting the competencies acquired by participants in INEA's adult learning programs. The skills assessed and developed in adult learning programs must be recognized to represent extremely complex behavioral patterns. These patterns are irrevocably embedded in a specific complex of cultural and social assumptions, systems of interaction, and values. At the same time, "deep structures" of human social interaction are shared by all cultures and "basic skills" of one social and cultural system can be transferred/translated into another with appropriate assistance.

Recognizing the characteristic conceptual and cultural learning style of INEA experienced adult learners can provide useful guidance in adult education program efforts to provide these learners with continuing opportunities for adult learning. This utility stems from better understanding the "axioms of discourse" that form the basis for their learning — the assumptions brought to the literal and conceptual dialogue between "instructors" and "students". These assumptions —

about exactly what is going on in the course of instructing/learning and how these interactions "normally" take place — are an integral part of the invisible but real tool chest used by learners to structure and facilitate their learning.

It should be recognized from the outset that Mexican immigrants to the U.S. are not necessarily representative of the population of adult learners served by INEA. California bound migrants originate disproportionately from rural "core sending" areas of Mexico, from villages with long traditions of northward migration, and from families with some prior migration experience and some modest financial resources.[2] Consequently, although we analyze the competencies acquired in the course of completing the entire INEA elementary skills curriculum, instructors should expect that most adult learners in California classrooms who have participated in INEA literacy programs have not completed the full continuum.[3]

INEA's Model of the Adult Learning Process

Basic literacy development (*alfabetización*) is seen as a central social and economic problem in Mexico — particularly in rural and remote areas. INEA's program of basic literacy development is intended explicitly to supply adults who do not have the ability to manage their lives and interact successfully in an evolving society with the ability to participate in all aspects of Mexican life. That is, the literacy development framework stems, in part, from national economic and social development policy, not simply from the everyday demands of contemporary life in rural areas of Mexico.[4]

The INEA adult learning model departs significantly from equivalent U.S. formulations in its emphasis on combining literacy development and adult learning as a part of its community and national process of social and economic development. Illiteracy is not seen as an individual problem requiring remediation (and subtly implying some form of social pathology or deficiency) but as a

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2 The most definitve characterization of northward-bound migrants is to be found in Douglas Massey, et al., **Return to Aztlan**, University of California Press, Berkeley, 1987. There is an extensive literature which further demonstrates the heterogeneity of U.S.-bound migrants, details recent changes in migration flows, and which profiles migration in terms which depart from the traditional settler vs. sojourner dichotomy toward recognition of a continuum of migration strategies.

3 It should be assumed that migrants' participation in adult learning programs in Mexico are interrupted by the exigencies of migrating, as in the U.S. This is known to be the case for at least one important group of California-bound workers – Mixtec migrants participating in INEA-sponsored programs in Baja California.

4 It must be observed, however, that INEA's conceptual framework gives as little attention to the pervasive phenomenon of transnational migration as does the U.S. conceptual framework. The omission of transnationalism from both countries' pictures of everyday life is more a function of nationalist sentiment in both countries as it is a reflection of lack of knowledge, since contemporary transnational migration patterns have been studied extensively for at least the past two decades and are now fairly well understood.

common problem confronting Mexican society as a whole. This is not surprising in the social context of a country that recognizes itself as a developing nation in an intermediate stage of economic evolution. It is for this reason that the concept of *solidaridad* (solidarity) as a key element in the adult learning system remains more than a convenient political slogan of the federal government. This over arching perspective on adult literacy development and learning directly impacts learners' sense of the process they are engaged in and literacy promoters' sense of their relationship to adult learners.

INEA's Strategic Approach to Adult Learning

For the Mexican adult learning system and adult learners, literacy development is seen not as a problem but as an opportunity. An important outcome of INEA's literacy development program is seen be the process by which different social sectors (government, volunteers, and learners) are brought together in solving the problem of illiteracy. Basic literacy development is also seen as a means of consolidating group social values through interaction — between literacy promoters and learners and among learners themselves. Basic literacy development is also viewed as a process in which it is essential to have a positive impact on learners' of self–worth and self–esteem. The INEA's adult education delivery system relies on the collaboration of several different groups — technical support and coordination staff, volunteers, and adult learners themselves. Therefore the teaching/learning endeavor is always seen as being a collaborative activity — a process to be valued not only for its educational outcomes (i.e. decreased illiteracy) but, also, for its role in fostering positive social interaction and change.

INEA's approach is at once an instructional strategy and a philosophy of education. The basic principle is that learning begins as a group activity (usually conceived of as a Freirian study circle) and continues as an individual pursuit. This means that a group of learners are considered to have the right to determine their own learning objectives (as opposed to conforming to objectives set in a framework established by some third party) and the responsibility to carry out this group compact. While the very existence of INEA's national curriculum framework departs from "pure" Freirian principles, a key element in INEA's educational philosophy remains the principle of *autodidactismo* (self directed learning).. This means that adult learners with experience in INEA programs are expected to have relatively well developed skills in "learning to learn". — a "building block" for successful and continuing adult learning.[5] Moreover, at least in principle, the INEA conceptual framework has continually reinforced the basic Freirian principle that empowerment through reading/writing (i.e. participating in the symbolic systems that form the basis of contemporary society) is the

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[5] Identification of "learning to learn" as a key meta-cognitive competency is a natural consequence of a recognition of the skills demands of a rapidly-evolving information society and economy. Emphasis on this competency and related elements of post-traditional concepts of "literacy" stem primarily from social policy relating to workplace skills demand. (SCANS, 1992: Carnevale, 1989).

foundation for personal and social empowerment.[6] On the one hand, INEA experienced learners can be expected to assume a high level of responsibility for their own learning. On the other hand, such learners will also expect a similarly high level of commitment and involvement from an instructor, instructional aide, or volunteer tutor.

Development of Cognitive and Meta–Cognitive Competencies

The foundation for INEA's elementary level adult learning continuum is basic literacy development (*alfabetización*) INEA's **Instructivo Del Alfabetizador** succinctly states the three learning objectives for this first educational level as:

- learning basic reading/writing and computational skills
- understanding what one reads and expressing what one thinks in writing
- applying new knowledge in the course of daily life

Characteristically, this formulation refers both to the development of cognitive skills and the development of what are often called meta–cognitive skills — i.e. adult's engaging in complex social behavior involving a wide range of communication performance abilities that transcend basic cognitive competencies. These skills are referred to as meta–cognitive because they relate to the abilities required to deploy basic cognitive skills, to adapt current cognitive strategies to novel circumstances, and to reflect on the process of cognition itself, treating cognition as something to be understood, manipulated, and refined.[7]

INEA's perspective on adult learning not as a mastery of a defined set of competencies but as a process of social development also pervades the basic literacy development and adult elementary curriculum. The basic literacy development curriculum, for example, adopts a schematism for organizing learning objectives quite similar to Maslow's hierarchy of universal needs. Thus it first addresses themes of family interaction, and then builds on that foundation to explore the dimensions of the learner's immediate physical and social environment, the community, culture, and the nation. This approach is continued in the subsequent "adult elementary curriculum" with an emphasis on developing reading and writing skills in *Primaria–primera parte* with an overlay of thematic explorations in Primaria–segunda parte where basic skills are developed in the context of work, community, and civic life. As a whole, the adult elementary–level

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6 See Paulo Freire and Donaldo Macedo, Literacy: **Reading the Word and the World**, Bergan and Garvey Publishers Inc., Massachusetts, 1987.

7 There is an extensive body of practical and theoretical research into the formal nature which defines different orders of cognition and the extent to which such routines can be considered intrinsically human or duplicated by automated non-human systems. For the moment, there is powerful evidence that meta-cognitive competencies can be formally well-defined and "taught" (even to automated systems which serve as the host for a variety of "expert systems") but, for the moment, higher-order or meta-cognitive tasks are the intrinsic province of humans.

learning continuum in Mexico, then, adopts neither a "life skills" nor a "workplace literacy" set of objectives — seeing both domains of adult functioning as being of high priority. At the same time, despite the use of a national curriculum framework, it is expected that local literacy promoters will adapt the standard curriculum and respond with some flexibility to the local context as well as the needs and interests of a specific group of learners.

While INEA curriculum materials do not adhere to the "perfect" Freirian model of adult learning as the learner's increasing his or her ability to use language and mathematics as tools to explore gradually widening circles of knowledge and to dig constantly deeper in terms of understanding, the adult primary curriculum is quite different from its U.S. equivalent. The INEA primary curriculum, for example, affords even those adult learners with very limited reading, writing, and computation skills the "luxury" of exploring themes of ecology, social processes, and anthropology for which there is little space in the U.S. adult basic education curriculum.

In summary, adult learners who have participated in INEA sponsored learning activities will differ from U.S.–taught learners with similar levels of language and mathematics functioning in terms of their attitudes toward education, their obligations as learners, and toward the learning process itself. These, often subtle, differences relate as much to "learning style" as to "content" but quite fortunately the type of meta–cognitive abilities fostered by the INEA educational philosophy are the very abilities that are now being recognized as being critical to success in the context of the U.S. economy and society.

Validity and Relevance of INEA Certified Competencies

In assessing the competencies of a former INEA participant, it is crucial to remember the fundamental dilemma in "scientific" assessment of adult competencies. This dilemma stems from the inevitable disparities between standardized assessment tools purporting to measure an individual's real world competencies and the same individual's ability to mobilize those "core" competencies in the context of daily life (particularly in an unfamiliar cultural context). Specifically, it should be recognized that the ability of such testing methodologies for yielding relevant and reliable diagnostic information is extremely limited.

Because the INEA service delivery system relies so extensively on volunteers, the actual curriculum content of a program participant's learning experience should be expected to vary tremendously from area to area. Yet INEA's system for assessing and certifying competencies is a nationally standardized criterion referenced analytic model while what is needed for accurate assessment of the competencies developed by an individual learner would, in fact, incorporate curriculum referenced assessment elements also (since the national curriculum materials are to be customized in local regions). This means that INEA certified reports of competencies, while reflecting a valid assessment of learners' mastery of "core curriculum elements", will not be likely to provide a reliable

assessment of an individual learner's global competencies or the heuristic strategies he or she uses to deploy those competencies in practical everyday tasks in either the workplace or general social transactions.

Given the reality that INEA certification of adult learners' competencies provides a highly reliable but limited measure of global competencies, we recommend that U.S. adult education programs relying on INEA certified assessments for student placement, review with prospective students who report that they participated in an INEA sponsored program, the topics covered in their INEA "study circle", using the guide to INEA materials presented in Table 1 and the *Practical Implications* section of this paper.

Core competencies in using symbolic systems (i.e. language and mathematics) are, in theory, quite independent of specific language and culture. But the reality is that most learners experience some level of difficulty in formulating application rules for using these competencies when confronted with a new language (e.g. English) or new symbolic system (e.g. programming operations vs. arithmetical operations). Therefore, the transferability of even those competencies that the adult learner has clearly mastered in Spanish may decay to some extent in the context of an English language curriculum. Thus assessments of learners' "basic skills" competencies as reflected by INEA certification of skills must be discounted to reflect the additional burden experienced in using these skills in an unfamiliar and linguistic context.

Random and Systematic Variation in INEA's Adult Basic Education Curriculum

Variations not only in the quality of instruction but also in the content of instruction are to be expected — in both Mexico and in the U.S. To a large degree these can be seen as random variations — reflecting the character of a particular learning group, the personality and abilities of an individual instructor or group facilitator, and the extent to which a particular learner succeeded in pursuing an individualized course of learning. It is important to recognize that INEA builds into its learning programs systematic regional variations. Although INEA relies on a centralized, standardized, curriculum framework it also seeks to "customize" its' adult basic education: a) to serve distinct sub–groups of learners, and b) to reflect local content and build on an adult learner's daily involvement with their immediate physical, social, and economic environment.

INEA classifies adult learners into four broad population groups and has customized instructional materials and strategies within the overall framework so as to better meet the needs of each of these identified "service populations". The most distinctive sorts of targeted strategies to meet the needs of these distinct populations of adult learners are use of bilingual instruction for indigenous groups together with a locally appropriate curriculum for developing small individual or cooperative enterprises in promising types of natural resource exploitation (e.g. fishing, fiber production). Overall, the service populations identified by INEA are:

- ***Urban adult learners.*** A population considered to be at home in Spanish, to have some familiarity with reading–writing symbolic systems through daily experience. The service population lives in the inner cities or at the margins of the cities (where, in Mexico, some of the poorest of the poor live). The population is expected to be under–employed and to have very low incomes. Most learners are expected to be 15–40 years old.

- ***Rural Adult learners.*** This population is considered to be at home in Spanish but to have no contact, or insignificant contact with reading–writing–mathematics symbolic systems. This population is considered (in contrast, to the uprooted urban population) to have strong cultural traditions and networks of mutual support. This population is expected to be dominated by peasants, hired farm workers, women working in the home, and small entrepreneurs (e.g. shopkeepers, tire repair shops, restauranteurs, truck drivers).

- ***Indigenous adult learners.*** This population has a native language other than Spanish and is isolated from modern technology (even the agricultural technology which permeates many rural areas). This population, like the Spanish speaking rural population, has strong cultural traditions and is composed primarily of peasants, artisans, women working in the home, and trades people.

- ***Elementary school dropouts 10–14 years of age.*** Until very recently, only elementary school education has been compulsory in Mexico and many students didn't complete even six years of schooling. Thus INEA has identified this group as an "alternative education" service population.

Because the competencies acquired by adult learners participating in an INEA sponsored program stem from the specific variant of the INEA program they were participating in, it is important for U.S. instructors to secure at least basic information on a prospective student's background. From a practical perspective, this means that adult basic education programs should seek to determine to which of these population groups the learner belongs. The simplest way to elicit this information is to ask new program participants to describe their home village, its links to the U.S., and, in summary, what sequence of events brought them to the U.S. Adult education programs that fail to elicit this information because they feel such information is "too personal" or "private" will have inadvertently failed to explore an important dimension of a prospective learners' personal identity.[8]

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8 Readers interested in fully understanding the extent to which transnational community affiliations define the social universe of Mexican immigrants to California should review the worker of Roger Rouse on a Michoacan-California migration circuirt, particularly (Rouse, 1992) — "Making Sense of Settlement: Class Transformation, Cultural Struggle, and Trasnationalism among Mexican Migrants in the United States" in Glick Schiller, Basch, and Blanc-Szanton (Eds) **Towards a Transnational Perspective on Migration**, The New York Academy of Sciences, 1992. A very useful discussion, drawing on the theoretical work of Michael Kearney of the University of California, Riverside is to be found in Chapter 3 of Zabin Et al., **Mixtec Migrants in California Agriculture: A New Cycle of Poverty**, CAlifornia Institute for Rural Studies, May, 1993.

While members of Mexican indigenous minorities may be reluctant to identify themselves as a member of an ethnic minority group, it is important for adult program instructors to ask at least this basic demographic information — since, of course, English may be a third, not a second language, for these learners. Mixtecs, for example, are now estimated to make up somewhere between five and 10% of the California farm labor force.[9]

The analysis presented in this paper is based on the specific INEA curriculum framework developed for rural areas — because the majority of Mexican adult learners with very low educational levels now in the U.S. are immigrants from rural areas (Cornelius et al, 1990; Bustamante, 1990; Kissam, 1992). From a practical perspective, this means that very little "background" literacy competencies should be assumed. Moreover, it should be assumed that, despite INEA's commitment to configuring the adult elementary curriculum to meeting the workforce preparation needs of a modern industrial society, there has been little success in addressing the skills requirements which characterize contemporary U.S. labor demand (Carnevale, 1989, 1992; Philippi, 1992; SCANS, 1992: Kissam, Dawson, and Intili, 1993).

Competencies Acquired Via Participation in the INEA Program Before and After 1990.

Adult education has been a high priority for Mexico since the 1920's. Methodology and content have evolved over this period, particularly in the last decade. During the most recent period, from the creation of INEA in 1981 until the adoption of the current curriculum framework in 1990, the methodology used for basic literacy development (*alfabetizacion*) was referred to as "La Palabra Generadora" (The Generative Word) while the elementary school curriculum was based on an approach referred to as "Primaria Intensiva para Adultos" (Intensive Primary School for Adults).

The basic literacy development framework was nominally Freirian and corresponded to contemporary "language experience" approaches to learning and service delivery was based, as it is now, on the efforts of volunteer literacy promoters. However, the actual curriculum as exemplified by instructional materials was not closely linked to the pressing concerns of adults nor was it designed to have demonstrable and immediate effects on learners' lives. One of the main problems was that staff development and training support did not meet the standards required to assure that volunteers could function effectively as Freirian facilitators.

Practically, this means that the analysis of INEA based adult elementary competencies described in this paper should be used only in assessing the

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9 (Zabin et al, 1993). The proportion of limited-Spanish speakers in this population is not known with certainty but younger migrants are more likely to be limited in Spanish — because Spanish language instruction programs experienced funding limitations during the 1980's (Ann Garcia, personal commnication, 1992).

competencies of INEA program participants from 1990 onward, although the general discussion of INEA's overall educational philosophy and instructional strategy reflects the agency's philosophy since its inception.

The INEA Curriculum Framework and Competencies

This section reviews the structure of the INEA's adult basic skills curriculum framework and the specific learning objectives that constitute the framework. In this section we also review INEA the instructional materials that form the practical basis of the curriculum.

General Overview of the Elementary Level Learning Continuum

INEA's elementary level adult learning continuum consists of three distinct curricula that are carefully articulated to facilitate progression through the learning process. These curricula are the following:

1. **Alfabetizacion** (Basic Literacy Development). This curriculum consists of four learning units. Three units introduce new basic concepts in using the formal symbolic systems of reading/writing while the final unit consists of a structured review of material and practice activities. Reading/writing system and arithmetical competencies are learned concurrently.

2. **Primera Parte de Primaria** (Primary Core Skills). This curriculum consists of eight learning units in language arts and eight learning units in computation and arithmetical applications. While the curriculum is designed to introduce broad social themes, it is focused on basic skills development in reading, writing, and arithmetic. Developing "learning to learn" skills, particularly experience and confidence in self directed learning, is a specific objective of this curriculum.

3. **Segunda Parte de Primaria** (Primary–Advanced Skills and General Concepts) This curriculum continues the development of language arts and mathematics initiated in the primary core skills development. The language arts strand introduces a variety of themes relating to language use and applications — e.g. language used to convey imagination, language style and genres over a course of 20 lessons. The mathematics curriculum introduces new arithmetic concepts, basic geometric concepts, and applied problem solving. The Primary Advanced Skills and General Concepts curriculum includes four "practical education" instructional sequences — education for family life (10 units), education for community life (eight units), education for worklife (seven units), and education for participation in national life (six units). INEA recommends that the strands of language arts, mathematics, and family life be addressed concurrently, followed by concurrent attention to the community life, worklife, and national life instructional sequences. However, INEA stresses that for heterogeneous groups of learners (in practice, many if not the majority of groups) learning timetables and activities should be individualized.

Table 1 below presents an overview of the structure of INEA's elementary subjects continuum. The left column identifies the elementary subject hierarchy and expected length of time each part will take. The right column identifies areas of instruction and subject matter, including the higher order skills.

Table 1

Schematic Overview of INEA Elementary Subjects Continuum

Alfabetization — BASIC LITERACY DEVELOPMENT *Integrated Development — Math/Language* 40 hours over a period of 3–4 moths	Learning to Learn Familiarity with Symbolic Systems Self–Confidence, Self–Esteem
Primera Parte de Primaria PRIMARY CORE SKILLS DEVELOPMENT *(Concurrent Development — Math/Language)* 80 hours over a period of 8 months	Learning to Learn, Analytic Skills – Language Communication Skills – Language Application of Basic Concepts – Math
Segunda Parte De Primaria PRIMARY ADVANCED SKILLS AND GENERAL CONCEPTS ***Primary Advanced Skills*** *(Concurrent Development — Math Language, Life Skills)* 80 Hours — over a period of eight months ***General Concepts and Skills Application*** *(Concurrent Development — Skills/Concepts in Social Interaction)* 60–100 Hours — over a period of 6 months	Emphasis on Math/Language Skills General Concepts — Family Life Refinement Analytic Skills, Problem–Solving Self–expression, Reflection on learning achievements Community Life, Worklife National Participation Consolidation Math/Language skills Application of basic skills to content areas Deployment of skills to understand regional social/natural environment
Total: 280 hours + over a period of 24–26 months	**Basic Literacy and Numeracy, Basic General Concepts, and Applications**

Duration Learning Timetable and Progress through Textbooks

This section summarizes the duration of each set of learning activities and the instructional materials that are the curriculum's foundation. The INEA instructional strategy assumes a process that combines group learning activities and individual self directed learning. Consequently, the elementary level learning continuum does not represent a fixed number of instructional hours. However, INEA presents general guidelines for the amount of time to be devoted to each lesson, unit, and curriculum. These time guidelines and instructional materials are as follows:

1. **Alfabetizacion** (Basic Literacy Development). No specific guidelines are provided for this curriculum. However, the four units include 22 lessons (one introductory meeting and seven lessons per Unit) and a period devoted to structured review/practice. Given INEA's standard guideline of 1.5 hours for a typical study circle meeting, this basic literacy development learning phase is equivalent to about a 40 hour curriculum.

Texts developed by INEA for the basic literacy development curriculum are the following:[10]

> **Libro del Adulto – Nivel 1.** This very basic text adopts an integrated approach to reading/writing and arithmetic. Material is arranged by unit and lesson and successively builds from phonemics through reading familiar material and writing responses to simple questions. In conformance with the overall curriculum structure, language and arithmetic learning is based on material of familiar content. The curriculum culminates with whole language exercises — reading and writing letters, filling out money orders, and recognizing and writing the denomination of bank notes.
>
> **Cuaderno de Ejercicios – Nivel 1.** This student workbook is designed to be used with the text "Libro del Adulto". Exercises begin with motor skills exercises and proceed through phonemics to writing words and oral reading of simple, familiar sentences — e.g. "The whole family cooperates in working in the fields" (En el trabajo del campo coopera toda la familia"). Arithmetic exercises begin with a lesson on numbers from 1 through 9 and continue to three place addition (with some exercises integrating uses of letters and numbers).
>
> **Instructivo del Alfabetizador – Nivel 1.** This is a small handbook for literacy promoters, designed to provide them with a basis for facilitating group and individual learning. The handbook presents the curriculum framework (a schematic of the four study units and social themes), a review of the instructional materials that make up the basic literacy development kit,

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[10] This analysis is based on the rural edition of INEA materials, the version most likely to have been used by former INEA learners now in California.

and outlines very simple recommendations for instructional techniques. This practical guidance is followed by summary lesson plans for each lesson and unit in the curriculum that specifies learning objectives, themes, and activities.

In addition to the specific reading/writing and computational material in these texts, the material introduces adult learners to graphic icons used to refer to common learning activities — e.g. a pencil icon for tracing lines, a book icon for reading, an icon for underlining, an eye icon for looking carefully at a figure or illustration.

Other simple meta linguistic concepts are also introduced — e.g. horizontal and vertical. These form the basis for eventual incorporation of crossword puzzle exercises in the workbook and routine use of boxes for recording answers to computations, etc. This emphasis on meta linguistic cognitive tasks is particularly important because adults living in rural areas have little exposure to materials requiring "forms literacy". Without this emphasis, low literate adults in this population experience very serious difficulties in performing even the most basic forms literacy tasks — e.g. distinguishing columns and rows, recording answers in an indicated location, scanning tabular material.[11]

2. **Primera Parte de Primaria** (Primary Core Skills)

The curriculum framework for both the Primary Core Skills Development and the Advanced Skills and General Concepts curriculum is presented to literacy promoters in two handbooks presenting the **Modelo Pedagógico de Educación Primaria para Adultos — MPEP** (The Pedagogic Model for Primary Education for Adults). One handbook details instructional strategies for the first half of the adult elementary curriculum, the other covers the second half.

The MPEP recommends concurrent use of language arts materials and arithmetic materials for a total "course length" (including both group learning and self directed learning) activities of eight months. The first six months are devoted to introducing new concepts and skills and developing them. At the end of this period, each student is individually assessed and guided through a two month period of review, practice, and skills consolidation referred to as the *Periodo de Recuperacion* (Recovery Period) after which students take the standardized test for certifying their having achieved the competencies in this curriculum.

The six month learning period is considered to consist of eight language arts units and eight mathematics units, covered in the course of 46 learning sessions — which may be a combination of group learning sessions and individual self directed learning. Thus, the Primary Core Skills curriculum represents approximately 80 hours of instruction (assuming approximately 10 hours of review

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11 (Kissam, Nakamoto, and Herrera, 1993). This paper describes in detail the forms completion difficulties experienced by low-literacy Latinos with 0 through 6 years of primary schooling (predominantly Mexicans and Salvadoreans) in responding to the 1990 Census form — a relatively well-designed form.

and practice during the Recovery Period). This estimate is approximate as the MPEP encourages not only flexible scheduling but also individualized study plans based on literacy promoters' observations of individual student progress.

Texts for the Primary Core Skills Development are a language arts text — **La Palabra es Nuestra — Primera Parte** (2 vols.) and a mathematics text — **Nuestras Cuentas Diarias – Primera Parte** (2 vols.). These texts are described briefly below.

> **La Palabra es Nuestra – Primera Parte** .[12] This text uses a format similar to the Basic Literacy Development texts. Vol. 1 begins with an extensive section of reading and writing exercises designed to build syntactic (e.g. word gender, direct object) and semantic skills (e.g. recognition of word groups). Most is based on familiar social situations but other units include attention to basic information on Mexican history (e.g. Cuautehmoc, Benito Juarez). This first volume also introduces stylistic variants in language via poems written by major contemporary poets, reading for comprehension, and practical use of written language in planning and organizing everyday activities (e.g. list making as part of planning a community festival). Volume 2 continues with a very strong emphasis on reading for comprehension while, at the same time, introducing new informational context on learners' physical environment, culture, and social experience. The text also begins to incorporate units directly addressing "learning to learn" (e.g. a unit on how to read well; a unit on identifying the main theme of a paragraph; a unit on denotative and connotative meaning). Toward the end, the text begins to emphasize "generative" tasks in language — e.g. summarizing a text, interpreting and comparing different poems.
>
> **Nuestras Cuentas Diarias – Primera Parte** This text, presented in two volumes as is the language arts text, begins with new concepts about numbers, counting, measurement, more complex addition, an introduction to subtraction, basic geometric concepts such as perimeter in Volume 1. Volume 1 continues up to three digit multiplication and subtraction. Volume 2 begins with an introduction to multiplication and continues up through long division. The text generally emphasizes practical applications for arithmetic computation (e.g. multiplication to determine how much paint to use to paint a wall, multiplication for buying supplies for sewing and carpentry tasks). Volume 1 also presents different units of measure, different numerical systems (e.g. the Aztec calendar), and fractions. Volume 1 ends with simple word problems with practical applications — e.g. buying gas when gas consumption rates are known, a cooperative buying building material.

The Basic Skills Development curriculum is well designed in that it skillfully builds on adults' practical competencies developed in the course of day to day life. However, the language arts text is much more creative than the

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12 The title of the text would be translated literally as "The Word is Ours" but the actual meaning is "Our Turn to Talk" a semantic ambiguity subtly emphasizing language as a means for empowerment and, as in all INEA, texts, collective approaches to learning, working, and participating in community life.

mathematics text with respect to building learners' analytic skills. The mathematics competencies established by the end of the curriculum leave the learner with a much greater objective gap in terms of everyday workplace competencies and life skills required to function outside a rural setting than does the language arts text.

3. **Segunda Parte de Primaria** (Primary–Advanced Skills and General Concepts)

This final curriculum in the tripartite elementary skills continuum consists of two main sub parts. During the first eight months of this final period of elementary level learning, the emphasis continues to be on building language and mathematics skills. However, this final skills development phase coincides with Family Life Education in which learners begin to address the most immediate of several sets of concentric circles of social life. The introduction of this major practical "content area" in the first half of the *Primaria–Segunda Parte* curriculum together with language and math skills development provides a means for learners to begin applying their increasingly sophisticated analytic and communication abilities to the real world. This is a key step in providing learners with the basis to deploy language skills that up until this point have been developed in relative isolation, despite the constant efforts to integrate learning activities with everyday life.

The second sub part of the Advanced Skills and General Concepts curriculum shifts from a primary emphasis on language and math skills development to the three crucial areas of social life — Community Life Education, Worklife Education, and National Participation Education. During this period, as in the earliest period of basic literacy development there is an emphasis on learners reflecting on their individual roles in a social context, on building self–esteem, and on application of skills.

The *Primaria–Segunda Parte* skills development portion of the curriculum is made up of 20 units (40 lessons) of language arts, and 10 units of mathematics (46 lessons). The "general subjects" portion of the curriculum consist of 10 units (33 lessons) on family life, eight units (18 lessons) on community life, seven units (16 lessons) on worklife, and six units on national life.

During this phase of the elementary level adult learning curriculum, INEA recommends that state programs develop "customized" instructional materials as a vehicle for students to better understand their immediate natural and social environment. These materials are developed with careful attention not only to content but "latent" messages about self–worth.

INEA recommends that state programs develop State Literary Anthologies with the goal of highlighting individual identity and the worth of self expression in language. This is an impressive commitment to "bringing literacy to life". In Baja California, for example, the local INEA program developed a publication in which adult learners collected and wrote down oral histories of their own communities — providing an important and original contribution to the common store of local

knowledge.[13] INEA recommendations are also to prepare customized local materials on:

state history	geography	health and nutrition
biographies of prominent figures	state laws and institutions	ecology
regional cultural identity		

This final phase of the elementary skills continuum forms something of an educational coda as students consolidate and build self confidence in using the skills they have developed as tools for understanding and manipulating the world around them.

Like the earlier Basic Literacy Development and Primary Core Skills curricula, the framework for this curriculum is provided by nationally distributed textbooks. They are the following.

La Palabra es Nuestra – Segunda Parte. Like the first half of the elementary level language arts curriculum, this consists of two volumes. The second half, however, emphasizes the use of language in context — for self–expression, for analysis, and as a basis for dialogue. The 20 language arts units mesh well with subject matter development — e.g. with units on nature, song, science, folk tales, and an introduction to literature. Throughout the text, there is a strong emphasis on language for self–reflection.

Nuestras Cuentas Diarias – Segunda Parte. Like the first half of the elementary level language arts curriculum, this consists of two volumes, consisting of 10 units, with 4–5 lessons per unit. The first lesson consists of a review, continued in the second lesson but supplemented with an introduction to six digit numbers. The next three units deal with fractions and decimals, including ratios and conversion of fractions to decimals. This section of the curriculum ends with a lesson exploring applications of ratios. Units 6–7 address two parallel strands — decimals and area calculations. Unit 6 continues to deal with decimals and operations with decimals. It then introduces perimeter calculations and applications in blueprints and maps. Unit 7 consists of basic computations again. Unit eight introduces the area of a circle, the concepts of volume (and practical applications of capacity), ending finally with prisms, cylinders, and cones. Unit 9 is, once again, devoted to practical applications — using percentages (built on the foundations of decimals) in everyday life. The final unit addresses important applied skills — organizing information, graphs, the concept of mode and mean, and deductive reasoning.

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[13] **El Mesquite: Para Seguir Accionando**, 1990

Nuestra Familia This 10 unit volume is designed to build awareness of the role of the family as a social unit and to address high priority practical and social concerns. This text begins with a three unit sequence on the concept of the family — the diversity of families in Mexico, personal and sexual relationships of couples, family planning and childbearing. Unit 4 focuses on child development, including both physical development and social development and support for children's educational experience. Units 5–7 then are devoted to health themes: basic human physiology (Unit 5), nutrition and health (unit 6), accidental injuries (Unit 7). The final three units are devoted to families' relations with the larger social world, the local community, mass media, and the socio–legal system. This volume adopts a strongly pro–social tone — focusing on the "skills" required to participate successfully in social life.[14]

Nuestra Comunidad. This volume begins with an exploration of the diversity of local communities in Mexico, geography, and differences in ecosystems in the first two units. The subsequent five chapters are oriented toward providing learners with a solid basis for participating in community life. The final chapter reviews the local, state, and federal levels of government. This volume, like the family life one, is actively oriented toward building learners' ability and motivation to interact with others in a positive fashion. It deserves to be noted, however, that because the material is well tuned to Mexican community life, it does little to prepare immigrants for life in the United States. For example, the unit on diverse forms of community organizations has little relevance for U.S. life and may, in fact, paint an idealistic picture of social organizations in Mexico that incorporate no information on the realities of organizational functioning.

Nuestro Trabajo. The rural version of this text reviewed here begins with a theoretical introduction to the concept of worklife, followed by two units devoted to work in natural resource industries. Units 4 and 5 are devoted to a review of the history and current configuration of Mexican industry, commerce, and legal system. Unit 5 also presents an overview of social and human service programs (which from a Mexican social and cultural perspective) are closely linked to worklife, not life apart from work. Unit 6 provides an excellent review of the informal work sector — an important part of Mexican worklife (and arguably also U.S. worklife). Units 6 and 7 address workers rights and work related social organizations in Mexico, material that is crucial for social participation in Mexico but only tangentially relevant to social and worklife in the U.S.

Nuestra Nacion. This text deals principally with Mexican history and is not reviewed here as it has little immediate relevance to basic skills in the U.S. context. This text is much less successfully than the three other "social life" texts in addressing the real world practical concerns facing adults seeking to function effectively in contemporary society.

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[14] This instructional modality, while seldom found in U.S. adult education (which is more likely to be value-neutral) is, however, a familiar aspect of public sector outreach and education efforts in the U.S. — particularly in connection with a broad spectrum of public health initiatives.

In general, INEA's elementary level adult education curriculum is likely to develop skills equivalent to six years of a standard elementary curriculum. There are, however, subtle, and important differences. The language arts curriculum is likely to result in more developed communication skills than apparently equivalent curricula because of the very strong emphasis on reading comprehension, analysis, and self expression, combined with "adult content" — i.e. themes drawn from the complex set of social interactions that characterize adults' interpersonal interactions. In contrast, the mathematics curriculum, by emphasizing practical arithmetical operations, is not likely to provide a solid basis for the sort of mathematical reasoning, analysis, and problem solving that characterizes the contemporary workplace and economic life in the U.S.

The Family Life curriculum is designed for a rural peasant population. It does a good job of introducing fundamental concepts of family functioning (e.g. family planning, child rearing), basic physiology, and social interactions (e.g. the effects of mass communications on the family). Nonetheless, the curriculum is deficient as a means for providing uprooted peasant families who now live and work in modern industrial settings — either in Mexico or in the U.S. — with a solid basis for managing their lives. This means that adult basic education for Mexican immigrants of rural origin, even those who have participated in INEA sponsored learning programs, must prepare learners to address a whole new set of challenges related to functioning in an information society.[15]

The other serious deficiency of the INEA "general subjects" portion of the curriculum in terms of the life/work skill preparation is the worklife material. The deficiencies of this material for meeting the needs of either migrant sojourners or settled immigrants in the United States stem from INEA's justifiable commitment to customizing materials to build on adults' experience of living in their immediate environment — in the case of these materials, remote rural areas of Mexico. Worklife material emphasizes natural resource industries and occupations such as cattle raising and fishing, small trade and presents only a rudimentary introduction to the complex issue of interactions in the contemporary industrial or service sector workplace. Thus, the complex and challenging issues that must be addressed by employees and their employers in efforts by Mexico and the U.S. to build a world class workforce are not broached at all. It is our judgment that adult basic education materials for at least those adult learners from rural areas of Mexico (with or without prior participation in INEA's adult learning programs) will need far more emphasis on inter–personal relations, teamwork, problem solving, career planning, intermediate and advanced communication skills, research and reference skills. An introduction to the basic technology of the information society (e.g. keyboard skills, software menus) will also be necessary.

As might be expected, INEA's general approach in addressing issues of community life and national participation is distinctly and appropriately Mexican.

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15 For a detailed discussion see Kissam, 1991.

There are some notable strengths such as the treatment of ecosystems and conservation as an integral part of community life. At the same time, the treatment of community institutions is somewhat idealized and theoretical, reflecting very little of the real life concerns, preoccupations, and problems on the minds of adult learners. Similarly the national participation material takes the time to address important issues of Mexicans' diverse cultural origins but, at the same time, devotes a great deal of attention to a fairly traditional synopsis of Mexico's 19th century history. As with the community life material, little attention is given to what knowledge, perspectives, competencies, and problem solving strategies will be needed for individuals to function meaningfully as part of democratic institutions.[16]

Completion of the entire sequence of INEA literacy development and elementary skills curriculum must be understood by U.S. instructors to provide a much more consistent emphasis than comparable materials on themes of social interaction, communication, teamwork, and community participation. Within the context of the SCANS competencies, this suggests that INEA experienced adult learners will have a very solid foundation for problem solving related to social interaction but will, nonetheless, lack critical competencies required to use those skills effectively in the context of U.S. society.

Naturally, since good adult learning materials are closely linked to learners' actual environment and experience, INEA's basic skills development strategy, by virtue of its strong links to the Mexican context, has many weaknesses in building competencies for social functioning in the U.S. This is because individuals' social functioning is rooted in a characteristic cultural, institutional, and legal context. Some general, universal skills of teamwork and problem solving can be transferred to the U.S. context (e.g. structured dialogue to define alternative courses of action) but specific sorts of knowledge (e.g. the legal protections afforded workers, the legal rights and responsibilities of landlords) will be needed to grapple with real world problems in the workplace and in daily life. Where "educationally disadvantaged" U.S. adult learners can be expected to know the "rules of the game" for functioning in U.S. society but lack skills in game strategies, Mexican learners' strategies can be expected to be well developed but lack an adequate foundation for making "good moves".

One challenge facing instructors working with INEA experienced adult learners is to assist their students in reinterpreting, reformulating, and transferring their concept of social life in Mexico to that of the U.S. This task requires simultaneous attention to technical issues about legal, social, and cultural differences between the two countries (e.g. local school board control of local schools vs. centralized control), to social dynamics (e.g. the relative weakness of

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16 This is not, of course, a uniquely Mexican difficulty. U.S. adult education materials in civics are even more seriously compromised by presenting a "theoretical", formalized, and idealized picture of what is involved in meaningful participation in the political life of a community, county, state, or nation.

unions as a mode of workplace organization in the U.S.), and to the realities of social life as an immigrant (e.g. discrimination, ethnic conflict, limitations on eligibility for benefits accorded only to citizens).

Inherent Constraints on Reliable Assessment of Competencies

The task of identifying a nominal set of "basic skills" within the full behavioral repertoire required to function successfully in everyday social and work life is difficult. In many respects, the decision to identify some requisite competencies as "basic" and others as "advanced" is an arbitrary one since, in actuality, both "basic" and "advanced" competencies are needed to accomplish common tasks.. Literacy research shows many cases in which persons with serious "basic skills" deficits have devised strategies to "work around" those basic skills deficiencies and, similarly, many cases in which persons demonstrating basic skills competencies experience substantial difficulties in applying those basic skills in everyday situations at work and in routine social interactions.

In both the U.S. curriculum content typical of American adult basic education courses and the INEA curriculum, the competencies "guaranteed" for an individual learner by completion of a "basic skills" curriculum are grossly inadequate as a basis for successful functioning in contemporary information society. The common recognition by ABE teachers that their students have developed improved self–confidence, improved self–esteem but "still need to work on building their skills" reflects, on the one hand, a valid recognition of the complex relationship between personal qualities and theoretical competencies and, on the other hand, the inadequacy of traditional adult education curricula in guaranteeing educationally disadvantaged adults anything more than a marginal social and economic functioning.[17]

The bottom line in analyzing the INEA elementary skills curriculum as a basis for individualizing instruction provided to an adult learner with previous participation in an INEA program is that the task of extracting a nominal set of "basic skills" from the behavioral repertoire required to function successfully in everyday social and work life is not easily accomplished. While both the U.S. instructional package and the INEA learning program may, in some cases, prepare adult learners for successful functioning in work and social life, such success is not "guaranteed" by successful mastery of the competencies embedded in the official curriculum or instructional materials.

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17 While the Literacy Act defines "basic literacy" as equivalent to "eighth grade" competencies, there is little evidence that even achievement of high school level competencies — as evidenced by successfully passing a GED examination or completion of high school — provides a reliable basis for lifelong career mobility and advancement. While GED completin or high school completion may well be positively associated with subsequent labor market success, it is not a sufficient condition for success nor is it clear that the specific cognitive abilities achieved (as distinct from the personal qualities required to complete either option) are significantly related to success in later work life.

The result is that something of a social science Heisenberg principle emerges. Curriculum referenced assessment measures cannot guarantee that an adult learner has achieved a minimal level of basic skills competencies in relation to broad societal demands, although it can provide a reliable basis for presuming that the concepts and competencies embedded in a specific curriculum have been mastered. Criterion referenced assessment measures can certify actual performance ability on standardized performance tasks but not easily guarantee that demonstrated performance ability is the result of having participated in a particular course of adult learning.[18] Moreover, some of the most commonly used standardized assessment systems that purport to incorporate measures "authentic" real world performance abilities have little credibility as measures of behavioral functioning in contemporary social life and worklife.[19] The recently developed ETA/ETS literacy assessment framework is the exception — because it is based on actual literacy tasks found in the workplace and typical social interactions and because it incorporates a more sophisticated concept of literacy as information processing than previous assessment frameworks.[20]

What might mastery of the INEA "general subject" competencies in family, community, work, and national life mean for U.S. teachers seeking to build on an adult learner's previous educational experience? They are competencies in (1) "learning to learn", (2) applying basic reading and writing skills to routine, predictable, problems of daily life, and (3) using symbolic systems in a "generative" fashion with some sense of confidence. However, completion of the INEA elementary continuum provides only a foundation for subsequently building "higher order thinking skills" (meta–cognitive competencies). It does not provide adult learners with the minimum competencies required to function with self sufficiency in contemporary society.[21]

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18 The best literacy competency framework currently available is that developed by the Educational Testing Service under a contract with the Employment Training Administration. See Irwin S. Kirsch, Ann Jungeblut, and Anne Campbell, **Beyond the School Doors: The Literacy Needs of Job Seekers Served by the U.S. Department of Labor**, ETA/ETS, September, 1992. See Table 2.2 for evidence of the substantial variance in literacy competencies among populations with different levels of educational attainment.

19 See Kirsch, Jungeblut, and Campbell, 1992) who report in Table 4.7 no significant difference in labor force status between high school non-completers who received their GED and those who did not. The strongest argument is that basic skills development is a necessary foundation for subsequent skills development — an almost tautologous proposition. For a detailed discussion of the complex interactions between multiple factors in determining labor market experience see Michael E. Borus (Ed.), **Youth and the Labor Market: Analyses of the National Longitudinal Survey**, W.E. Upjohn Institute for Employment Research, 1984.

20 See Section 2 (Kirsch, Jungeblut, and Campbell, 1992).

21 The findings of the ETA/ETS National Literacy Survey (ETA/ETS, 1992) are of particular concern in this regard.

Within the ETA/ETS national literacy assessment framework, INEA elementary skills curriculum completers can be expected to characteristically score in only a high Level 1 or low Level 2 literacy range for most literacy tasks (assuming a comparable Spanish language literacy assessment tool were available) — a level more than one standard deviation below the average literacy abilities of workers in even in occupational categories such as general laborers. This approximate level of literacy is comparable to the mean scores of U.S. young high school dropouts or, alternatively, the scores of students in with some experience in GED programs who, however, did not successfully pass the GED. While INEA completers can be assumed to have competencies similar to those of U.S. adults with somewhat less than a high school education (assuming INEA completers' literacy were to be measured in Spanish) — this level of literacy is associated with close to minimum wage earnings, extensive unemployment, self reported assessments of inadequate literacy in relation to recent occupational demands, and inadequate household income to allow for economic self sufficiency. In actuality, INEA completers' functional literacy in English will be lower than their Spanish language literacy abilities as measured by a hypothetical equivalent to the ETA/ETS assessment instrument.

Mexico and the United States can both expect a secondary "basic skills crisis" analogous to the that enunciated in **A Nation At Risk** if there is not serious attention to upgrading the "educational product" delivered within the current adult basic education framework. Even if it is assumed that the adult education service delivery system can implement extremely high quality control — an assumption that is clearly unfounded — the risk of relying on currently prevailing concepts of "basic skills" learning objectives in adult education is that educationally disadvantaged workers (a group including both immigrants and a disproportionate number of native born minorities) will be relegated to a secondary labor market. [22] Many native born educationally disadvantaged workers may acquire SCANS type skills in the course of their everyday life, irrespective of the degree to which such competencies are addressed in the ABE or ESL curriculum. However, for immigrants, adult learning programs may not only be a "second chance" for acquiring the basic skills required in an information economy/society but a "last chance".

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22 Here, we assume that excellent quality control might be defined as a 95% level of confidence that an individual learner's competencies are as predicted by a quality control screening procedure. In actuality, contemporary concepts of industrial quality control and the international ISO 9000 standards seek to achieve greater than a 99% level of confidence for actual vs. predicted outcomes. As evidenced in the past two decades of research in cognitive psychology, literacy skills involve such complex cognitive processes, it is inevitable that adults' performance in a standard matrix of competencies is "ragged" — showing suprising strengths and weaknesses in relation to any summary expression of their competency.

Practical Implications for Individualizing Instruction for Former INEA Participants

Ultimately, the differences in the competencies possessed by the former INEA participant who has completed the elementary level continuum as distinct from a comparable adult with only six years of elementary schooling as a child rest primarily on tools for acquiring new knowledge, confidence and ability in practicing and refining new competencies, and experience in cooperative learning.

Communication Competencies

As noted above, the communication competencies possessed by a former INEA participant who has completed the curriculum can be expected to be superior to those possessed by learners having completed California's elementary subjects curriculum. However, actual ability to deploy those basic communication skills via participation in an ESL program is seriously compromised by the information processing demands of functioning in an unfamiliar language. This, in part, is one of the reasons to utilize a "transitional Spanish language learning" approach in building higher order communication skills within ESL.

Communication competencies developed through participation in INEA's elementary level skills curriculum are generally comparable to those articulated in **California's Model Program Standards for Elementary Adult Basic Education.** (May 25, 1993 draft) that considers elementary adult basic education to be comparable to a nominal eighth grade level.[23]. INEA completers' competencies are likely to be greater and broader in terms of general reading for understanding — particularly in standard text format and in a variety of literary genres. Reading ability in specific culturally linked — particularly forms literacy — reading tasks (e.g. job application, notices of benefits awards, product warranties, school forms) is likely to be less developed among INEA completers than among completers of California ABE courses. ETS Literacy Level 3 tasks requiring readers to locate and integrate information embedded in contexts with distracters, or in complex tabular displays will be particularly challenging to even those learners who have completed INEA's full elementary skills curriculum.

In general, INEA elementary curriculum completers' prose literacy skills in reading are likely to fall into a range referred to as Prose Literacy Level 2 in the ETA/ETS literacy survey — assuming that materials were presented in Spanish to isolate "basic skills" competencies from English language competencies. This is a level exceeded by only three percent of the ETA/ETS study population with less

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23 It is not clear that the ABE "eighth grade competencies" are, in actuality, equivalent to an actual eighth grade level. This is, of course, a complex and controversial issue and, it is generally considered inappropriate to reference actual life and worklife skills to nominal grade levels.

than nine years of schooling.[24] As noted above, forms literacy, referred to as Document Literacy by ETA/ETS is more characteristically culture sensitive. Consequently, it is to be expected that INEA experienced learners will fall into the Level 1 Document Literacy level in the ETA/ETS taxonomy — a level exceeded by 68% of the ETA/ETS study population with less than nine years of schooling.

INEA curriculum completers' writing skills are likely to be more developed and broader in terms of use of style to communicate connotation than those of U.S. experienced learners with similar reading abilities. However, as in the case of reading, specific forms literacy tasks are likely to be difficult for INEA experienced learners because U.S. writing competencies involve more extensive skills in outlining, listing, and other non textual uses of writing.

Listening/speaking skills are likely to suffer most from cultural factors since many of the listening/speaking tasks required as part of life skills and workplace skills are, to some extent, stylized with a variety of optional and obligatory ritual procedures. Practically, the greatest priority should be given to listening/speaking skills development with instruction focusing on making explicit the underlying assumptions and implications of typical social interactions.

Mathematics Competencies

Mathematics skills acquired in the course of the INEA elementary level learning continuum are likely to be less developed than in the comparable U.S. adult basic education courses — a recognition overshadowed by the fact that, in neither case, are the adult learner's competencies even near those required by most jobs and most everyday economic transactions. As in the case of language skills developed in the context of Mexican culture and the Spanish language, even INEA experienced learners' ability to apply basic computation skills in an unfamiliar context (e.g. in analyzing paycheck deductions, in making decisions about savings, in evaluating alternative home mortgage packages, in career planning, or choosing between competing job offers) should be considered to be seriously compromised by a shifted cultural frame of reference.

Neither California's elementary ABE standards nor INEA's mathematics curriculum are likely to provide adults with the basic skills required to engage in everyday tasks required in contemporary society, nor the nominal 8th grade level

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24 The group referred to as the ETA/ETS study population in this context is the "young adults" group, not the JTPA or the UI/ES study sub-population. The average RP80 for level 2 prose literacy is 256, a score exceeded by only 2.5% of adults with less than 9 years of education. Thus the ESL/ETA Prose Literacy Level 2 measure represents perhaps the best available measure of "eight grade" skills competencies. For details see Beyond the School Doors: **The Literacy Needs of Job Seekers Served by the U.S. Department of Education**, ETA/ETS, September, 1992. The ETA/ETS competencies scale may, however, may incorporate culturally-specific factors in its measurement of literacy at Level 2 and, clearly does at higher levels of functioning.

of competency specified in California's standards.[25] INEA experienced learners competencies in computation are likely to be the equivalent to those of lifetime residents of the U.S. with similar educational experience However, this population's ability to interpret graphic and tabular material (which also is not addressed adequately either in California's elementary adult basic education standards or in INEA's curriculum) is likely to be higher among life long U.S. learners whose competencies stem from daily interactions with written materials relying on these modes of representation.[26]

Because the ETA/ETS Quantitative Literacy scale is based on real world tasks in the context of U.S. society, it is not possible to predict INEA completers' competencies with a great deal of reliability. On the one hand, their "pure" abilities in mathematical computation will probably place them within the ETA/ETS Level 2 of Quantitative Literacy. On the other hand, unfamiliarity with the sorts of real world problem solving incorporated in the Quantitative Literacy scale makes it highly probable that most INEA completers' actual performance would fall in the Level 1 range of Quantitative Literacy — a level exceeded by 92% of the ETA/ETS study population.

Elementary adult basic skills ability (for INEA experienced and California experienced adult learners) is also likely to fall seriously short in terms of analyzing numerical patterns, variance, and elementary concepts in statistics — all of which are incorporated into current middle school mathematics curriculum frameworks.[27] Unfortunately, these skills are difficult to develop in the course of everyday living or work in the blue collar occupations filled by immigrant workers so it cannot be expected that these competencies will have been achieved "naturally" outside the classroom.

Most seriously, the INEA mathematics curriculum gives only passing attention to mathematical reasoning and quantitative mathematical thinking as part of general problem solving capabilities. However, since California's ABE standards framework is seriously deficient in this area also, the competencies of INEA experienced learners is likely to be comparable to that of California adult learners with similar educational experience. Specific deficits include lack of experience in differentiating between linear and non–linear trends, geometry and visualization, making choices among alternative mathematical systems of representation to solve practical problems, general understanding of hypothesis

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25 Nominal standards for mathematics competencies for K-12 were developed by the National Council of Teachers of Mathematics in 1989. Subsequent observations regarding the inadequacy of both California's and Mexico's "basic" mathematics competencies are based on this framework, as well as benchmarks of workplace competencies for blue-collar occupations in manufacturing.

26 See "Implementing the Standards: Building Key Concepts for Calculus in Grades 7-12", **Mathematics Teacher**, October, 1990.

27 See "Implementing the Standards: The Statistics Standards in K-8 Mathematics", **Mathematics Teacher**, October, 1990.

formation, testing, and reformulation, conceptual understanding of mathematics as a "language" for discourse, and graphic representations used in probability.[28]

In terms of adult competencies in mathematical communication and reasoning, INEA experienced and California experienced learners can be expected to have systematic deficits that will probably not be addressed until the learner begins to participate in vocational training or in a workplace learning program fashioned to meet the needs of a specific work environment. There is little utility to the ABE instructor addressing the mathematics deficits of the INEA adult learner within the context of California's ABE curriculum since the capability (in terms of curriculum materials, staff support, and available time) does not exist within the California Adult Education system. The deficits likely to be experienced by INEA experienced learners are, however, important to recognize in the context of "intermediate" skills development where it can be expected that remedial instruction will be necessary.

Summary — INEA Completers' Basic Literacy Competencies

With regard to minimum levels of prose, document, and quantitative literacy required for successful functioning in the workplace neither completion of the INEA curriculum, completion of eight years of regular schooling in California's K–12 system, nor completion of a typical ABE or ESL course provides a basis for more than marginal success in the workforce.[29] For example, JTPA participants and Unemployment Insurance recipients in the ETA/ETS literacy survey who reported that their literacy skills were inadequate for their most recent job had scores on literacy scales in the 222–260 range — considered by ETA/ETS to be "Level 2" proficiency, while mean scores for respondents judging their literacy skills adequate for their last job fell into the Level 3 range — about 280–290 out of a possible score of 500.

INEA completers' literacy levels can be expected to be higher than those of persons who literally only completed elementary school. In this sense, the INEA curriculum provides more than "elementary level" literacy competencies. At the same time, INEA completers' overall literacy competencies can be expected to be lower than even very seriously educationally disadvantaged U.S. educated students, in part because the actual literacy competencies required to function in

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28 See T.A. Romberg, "Evidence which Supports NCTM's Curriculum and Evaluation Standards for School Mathematics" in School Science and Mathematics, October, 1990 on the issue of mathematical reasoning. See Magdalene Lampert, "When the Problem is not the Questiona nd the Solution is not the Answer: Mathematical Knowing and Teaching", **American Educational Research Journal**, Spring, 1990 for a discussion of mathematics discourse.

29 Although, technically, ESL classes target whole language development, actual instructional practice tends to focus on development of oral communication competencies combined with a secondary set of "basic skills" learning objectives relating to acquisition of "life skills".

U.S. society are significantly different than those addressed in INEA's curriculum used in rural areas. INEA completers can be considered to have better than average foundations for continued, rapid learning as adults, but worse than average competencies in mobilizing "pure" literacy skills to accomplish typical prose, document, and quantitative literacy tasks, although their written language skills (particularly in self expression) may be more extensive than those of otherwise similar native born learners.[30]

Basic Competencies in Social Interaction

In terms of standard life skills curricula, INEA experienced learners (at least those from rural areas) can be expected to have strong foundations for rapid learning but very little familiarity with culture specific tasks which characterize life and work in California. The learning task facing these students will be to "bootstrap" their way to a level of functioning where they can begin to learn from ongoing experience.[31] Also, some of the fundamental assumptions about the functioning of the social system, the nature of community life, and the nature of family life will be seriously shaken by immigrants' experience in the California context. It is for this reason that OTAN California–Mexico Project has begun to develop curriculum resource materials designed specifically to address high priority issues of Mexican immigrants' social and economic life in California. This curriculum, the "Pais Desconocido" curriculum, can be used to supplement standard materials in familiarizing Mexican adult learners with the shifted cultural, social, and legal underpinnings of California life.[32] At the same time, the Pais Desconocido curriculum, by emphasizing challenging, and sometimes controversial real life issues, provides a handhold for immigrants to begin developing SCANS

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30 The ETA/ETS literacy assessment tool evaluates only "receptive" language ability — i.e. skillls in interpreting text and mathematical information. The area in which INEA completers are likely to have higher-level competencies — using language for self-expression — is a competency few have ample opportunities to exercise in the context of the U.S. workplace. Writing tasks which require analytic or expressive use of language are more likely to be characteristic of professional and managerial occupational classifications than the manufacturing and service sectors jobs to which immigrants have easiest access.

31 Adult learning proceeds on a basis of hypothesis formation, testing, and re-formulation which requires, as a foundation, a rudimentary sense of "waht's going on" in the course of unfamiliar social interactions and transactions. The learning problems experienced in an unfamiliar context are particularly challenging in terms of hypothesis-testing since ven the astute learner must function, effectively as an ethnographer to decipher "the meaning" of the behavior of the people with whom he or she interacts. Arrving immigrants' residential and occupational segregation in immigrant enclaves and inadequate access to other social strata makes the task of understanding the full spectrum of social interactions still more difficult.

32 See Edward Kissam, "El Pais Desconocido: An Immigrant Issues Curriculum", Micro Methods, Berkeley, 1993. The initial 20 basic instructional modules of this curriculum are available from OTAN. Additional modules will be created in the future and it is expected that the individual modules will be expanded to include further guidance on learning objectives, learning activities, and instructional methodologies.

type competencies in communication, teamwork, acquiring and analyzing information, and problem solving.

Personal traits which are not strictly speaking "competencies" or "skills" but which are areas of personal development incorporated in curriculum frameworks such as that presented by SCANS — i.e. leadership skills, "character", self–esteem — also will require attention as part of the broad goal of translating basic competencies developed in the Mexican social and cultural context into the U.S. social context. Instruction will need to forge beyond surface level examples of differences in cultural style to build immigrant learners' deep level awareness of U.S. value systems, modes of social interaction, and styles of indirect communication.[33]

Meta–Cognitive Competencies

In terms of the meta–cognitive competencies incorporated into the SCANS framework (e.g. acquiring, analyzing, and mobilizing new information; problem solving; exercising leadership), INEA experienced learners are likely to exhibit competencies more or less equivalent to those possessed by lifelong California residents of similar educational experience. Subtle differences of cultural style will remain and may, in some specific contexts, compromise INEA experienced adult learners' competencies. For example, interactions with official agencies and persons in authority in the California context are likely to be significantly different than in Mexico, given the extreme reliance in the American public sector on procedural safeguards (e.g. appeals of decisions, the availability of client advocates, legal services providers, etc.)

In many respects, communication skills are central to the meta–cognitive skills inventory required of workers by the SCANS framework and by an emerging global economy. In this regard, the current basic language arts and mathematical curriculum will need to be supplemented to better address what Wertsch refers to as "speech genres".[34] Agility, flexibility, and creativity will come to be increasingly valued as part of communication skills as demands to communicate with a more diverse workforce escalate (e.g. Japanese managers and U.S. blue collar workers) and in more diverse ways (e.g. via E–mail, teleconference, memo, team report). One specific area where INEA experienced learners will show lower functioning levels is in terms of reference skills — since Mexico does not have the dense web of information resources or technologies

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33 While Mexican emphasis of mutualism (Lomnitz, 1979; Lewis, 1968) provide a solid basis for building skills at working as a member of a team, an ability valued within new organizational frameworks, the co-workers with whom new immigrants interact are fairly unlikely to espouse these same values, thereby presenting immigrants with "mixed messages" about how best to function in the U.S.

34 See James V. Wertsch, Voices of the Mind: A Sociocultural Approach to Mediated Action, Harvard University Press, 1991.

commonly available in the U.S. (e.g. libraries, on–line databases, telephone based information services, computer based subject searches, reference manuals).

INEA experienced adult learners will also have less familiarity and competency in a cluster of competencies often referred to as "information technology" competencies. On the one hand these competencies require simply familiarity with commonly used devices (e.g. the telephone, the ATM).. On the other hand, they require meta–cognitive skills foundation which provides the substrate for rapidly and easily adapting to a new technological iteration.[35] These competencies are only partially embedded in the California ABE curriculum but it is likely that many California based learners, whether through life experiences or formal instruction, have had some opportunities to build these skills while Mexican learners will have had no opportunities. These information technology skills include: keyboard skills, familiarity with menu–driven computer software, specialized audio/video information services available by cable or on cassette, icon–based basic computer operations, calculators, telephones, hotlines, catalogues, directories, fee–based information services, etc. Remedial instruction in information technology applications probably deserves high priority, particularly in working with adult learners from rural Mexico. Such an emphasis is justified because familiarity, confidence, and willingness to experiment with information technology are key components of lifelong learning which is, in turn, a foundation for continued individual, social, and economic self sufficiency.

Conclusions

The adult basic skills competencies measured by commonly used standardized assessment systems used both by INEA and by educational service providers in California represent only a small subset of the skills required for successful functioning in everyday life in California — on the job, at home, and in interactions with the society at large. It is also unclear to what extent participation in and completion of a specific learning program, in fact, can guarantee a learner has acquired *and can deploy* the competencies nominally incorporated into the curriculum. Given the uncertainties of both criterion referenced and curriculum referenced measures of an adult learner's functioning in performing authentic tasks, it is crucial to understand that tentative conclusions drawn from a participant's report of learning experienced in an INEA sponsored program absolutely must be supplemented with individual observation and informal assessment This recognition is particularly crucial in the key areas of familiarity with and competency in using information technology, culturally variant social

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35 While the telephone is a ubiquitous technology, the California Telecommunications Education Trust recently completed a major 3-year effort to inform educationally-disadvantaged California consumers about telecommunications. Nonetheless, this effort gave only passing attention to the use of the telephone for data transactions, concentrating instead on voice applications.

interactions, and meta–cognitive skills which are not explicitly addressed in either Mexican or U.S. curricula or measured reliably by existing assessment systems.

In general, INEA completers can be expected to have strong foundations for continued learning. INEA completers' prose literacy — reflecting both reading understanding and writing skills — will probably slightly exceed that of comparable U.S. learners having completed an ABE course. However, INEA completers' document and quantitative literacy levels are likely to be in the lowest decile of comparable U.S. learners. In terms of authentic social functioning in U.S. communities and workplaces, the burdens experienced by INEA completers' in transferring literacy skills acquired in the social and economic context of rural Mexican life will constitute serious barriers to successful functioning. An obvious and urgent need will be for California adult learning programs to focus on the key issue of skills transferability. English language skills will also substantially impact INEA completers' functional literacy in the unfamiliar linguistic context of U.S. life. Instructional techniques will need to recognize and overcome learning barriers stemming from immigrants' social isolation, occupational segregation in a secondary labor market, and shaken confidence in their analytic and problem solving skills.

Particular emphasis will be needed to develop workplace competencies commonly expected of workers in a technologically advanced industrial society. Learning strategies should also give special attention to "information technology" in a variety of manifestations as a crucial vehicle for lifelong learning. Developing document literacy and quantitative literacy skills will be particularly challenging and will and instruction will need to incorporate extensive use of actual work and social life materials where a variety of meta–cognitive strategies must be employed to successfully deploy basic information processing skills.

Special attention will also be required to problem solving within the unique and difficult context of living in the United States as an immigrant. This will require an "enriched" curriculum approach to building life skills since standard curricula to some extent build on assumptions that adults have internalized some of the "rules of the game" of a society which is, in fact, culturally, socially, and legally very different than Mexico's.

INEA's emphasis on cooperative learning and self directed learning provide a solid basis for extending adult learner's educational experience out of the classroom into all facets of their social, community, and work life. However, INEA's approach to learning can also be expected to have fostered learner expectations regarding solid, individualized attention which is not always easily provided under California's highly impacted current instructional systems. INEA experienced learners can be expected to be highly motivated but, also, relatively demanding. Given the magnitude of the learning challenge facing these learners, greater emphasis on learning outside the classroom (extension of classroom learning into everyday life, alternative learning models, and post program support for continued learning) will be a crucial elements of Mexican immigrants' ultimate success in developing the basic skills of the SCANS framework.

Within the framework presented by the ETA/ETS literacy framework, INEA completers are likely to fall into a Level 2 range for Prose Literacy and a Level 1 range for Document and Quantitative Literacy — scores broadly comparable to a seriously educationally disadvantaged population with more than six and less than nine years of schooling. Yet even within the ETA/ETS competency framework, instructors should expect to see a very substantial variation in individual competencies on each literacy sub scale.

The transferability of language, mathematics, and meta–cognitive skills developed in the context of Mexican society will continue to be a major issue and it should be expected that there will be substantial individual variations in successfully deploying "foundation" skills in the American social context. Without evidence to the contrary, it should be assumed that transferability is fairly low and learning activities should be designed to foster the development of SCANS type competencies. Given the reality that ESL courses make up the de facto basic skills development learning opportunities for immigrants, it would be appropriate for the ESL field to reconsider its overall role — particularly with respect to the design of workplace ESL programs, the possible rethinking of VESL (vocational English–as–a–second language), and the close linkage between the ability to process complex syntactic structures and cognitive performance.[36]

California adult education instructors should supplement rough estimates of the competencies expected from an INEA completer with informal individualized assessment of actual basic competencies, with assessment of the learner's ability to transfer and utilize those competencies in an unfamiliar, and often hostile, social environment. At the same time it should be recognized that very few Mexican immigrants to the U.S. will have had an opportunity to complete the entire INEA "elementary skills" curriculum. More important than recognition of actual "technical" competencies in utilizing the symbolic systems of mathematics, oral language, and written language, California adult education providers should recognize the characteristic motivation, learning style, and self directed learning experience of adult learners who have participated in INEA programs.

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36 A key recognition stemming from generative grammars is that resolution of syntactic structures is a key requirement for successfully performing the decoding or encoding tasks which make up the ETS Literacy Level 3-5 competencies. These "basic skills" are, in turn, the foundation for actual success (as opposed to abstract ability) in responding to common meta-cognitive skills demands highlighted by the SCANS competency framework.

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